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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,995	04/12/2004	Naoki Kubo	5-136US-FF	1582

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EXAMINER	
QUIETT, CARRAMAH J	
ART UNIT	**PAPER NUMBER**
2622	

MAIL DATE	DELIVERY MODE
11/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/821,995	KUBO, NAOKI	
	Examiner	Art Unit	
	Carramah J. Quiett	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/12/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS), filed on 04/12/2004, has been placed in the application file, and the information referred to therein has been considered as to the merits.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-3** are rejected under 35 U.S.C. 102(b) as being anticipated by Hirama (U.S. Pat. 5,528,642).

For **claim 1**, Hirama discloses a signal charge transfer line (fig. 4, ref. α77), which has been formed on a substrate (inherently – CCD register; col. 5, lines 31-46) and is formed to have a number of transfer electrodes (α2, α3, ...), for transferring signal charge by application of

transfer pulses (φ1a, φ2a) to the transfer electrodes via electrode lines (70, 71; col. 6, lines 1-12), wherein:

the number of transfer electrodes are divided into transfer electrodes of a plurality of sets (registers [α2, α3, ...] connected to input terminal 70) to each of which a common transfer pulse (φ1a) is applied (col. 6, lines 1-12 and 38-61);

electrode lines (lines connected between registers [α2, α3, ...] and input terminal 70) for applying common transfer pulses to the transfer electrodes of the plurality of sets are formed on said substrate in common for each of the transfer electrodes of the plurality of sets (col. 6, lines 1-12 and 38-61); and

a final electrode line (line connected between α1 and input terminal 63) for applying a transfer pulse (φ2La) to a final transfer electrode at an output end is inherently formed on said substrate independently of the electrode lines of respective ones of the plurality of sets (col. 6, lines 1-12 and 38-61).

For **claim 2**, Hirama discloses the signal charge transfer line according to claim 1, further including a plurality of drivers (clock signals applied to input terminals 63, 70, 71) provided in correspondence with respective ones of the plurality of sets of the transfer electrodes for applying transfer pulses to the corresponding sets of transfer electrodes (col. 6, lines 1-12 and 38-61);

wherein a transfer pulse (φ2La) applied by at least one driver (63) among said plurality of drivers is applied to said final transfer electrode via said final electrode line (col. 6, lines 1-12).

For **claim 3**, Hirama discloses the signal charge transfer line according to claim 1, further including a synchronizing circuit (not shown) for synchronizing transfer pulses applied to the

transfer electrodes of the plurality of sets and the transfer pulse applied to said final transfer electrode. As illustrated in figs. 6E/6Gafter t_2, clock signals φ1a and φ2La have in-phase successive clock pulses. After t2, when φ1a is high, φ2La is high. Hirama provides a description of the CCD linear sensor operation in col. 6, line 38 – col. 7, line 39. Also please see fig. 4.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wada (U.S. Pat. #5,220,185) A CCD shift register has a final transfer electrode formed on a substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carramah J. Quiett whose telephone number is (571) 272-7316. The examiner can normally be reached on 8:00-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CJQ
October 25, 2007

NGOC-YEN VU
SUPERVISORY PATENT EXAMINER